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ABSTRACT

In examining the potential role of satellites and cable in classroom use, technological developments have been seen as extensions of schooling, rather than education in the broader sense. It is said that most education actually occurs in the school format, however, more progress in media development is predicted in non-school contexts, especially in adult and continuing education. Effective use of satellites and cable might additionally help to restore the balance in cultural offerings and to create areas of understanding across the "global village." The universities should take an active role in developing the educational function of media apart from the classroom. (SK)

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Satellite/Cable Technology Conference; June 3, 1975

Keynote address: SATELLITE AND CABLE--NO HIGHWAY IN THE SKY FOR CONVENTIONAL TEACHING AND LEARNING

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The Conference on University Applications of Satellite/Cable Technology that Lorne Parker and his conference coordinating committee have so ably put together will bring us information on where we are respecting the development of satellite and cable, present a comprehensive cross section of our problems, and detail the high hopes we have for the useful employment of these technologies in education. While the focus of the conference is on university applications of satellite/cable technology, I have felt it necessary to look beyond the university to the larger society and culture in order to develop my theme. The university's special role and power in any technology's expression of its society and culture is the constantly implied leitmotiv throughout this presentation.

This presentation emphasizes educational satellite/cable opportunities and programming in the larger communities of learning and living, and will suggest--not in place of specific in-school use of satellite/cable--a broader public/university role for satellite/cable.

Satellite and cable telecommunication technologies have been extensions of what has been and is. "What has been and is" is what we call our culture: our way of perceiving ourselves, the world around us, persons elsewhere, our relationships, our means of determining fairness and justice, our discoveries regarding what is true, beautiful, good; ugly-bad; useful-useless; rewarding, not rewarding; our values, aspirations, priorities, and the role and usefulness of our technologies -- in short, the ways of mankind that we have found useful or necessary for survival, and that we therefore prize and pass on to our successors.

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When a new technology emerges, it emerges in the context of the culture of its creators or adaptors. Hence an existing technology is not value neutral; it is freighted with the aims and priorities of its creators, owners, controllers or adaptors. Cable and satellite (like radio, television, computers and other technological creations) serve the cultural values and aspirations of whatever society employs them. Hence an assessment of ultimate use or application cannot be made (or ought not be made) without reference to the social-cultural context in which the technology emerges.

For example, Society A sees radio, television, satellite and cable as technologies to strengthen the supreme power of the state.

Society B sees these technologies as means to serve society's needs for information, education and entertainment.

Society C sees these technologies as means to extend the rights of property for the derivation of income for the owners.

There is, then, a range of cultural views regarding what satellite and cable are and what they extend. The actual technology--the hardware--in each situation might be nearly identical; but socially, educationally, politically, economically, the uses of technology are widely different because of the cultural context surrounding the technological emergence.

Consequently, what Society A and B can "afford" in terms of media use may be beyond Society C; spending priorities derive from value systems, not merely from the absolute or relative wealth of the society.

In each society there are developers, users and consumers of technology; but they are differently perceived. In Society A, the government would be the sole developer and user, and the consumers would be acted upon. In Society B, the government would not be the sole developer and user, and consumers would have a responsive role in determining user policy. In Society C industry and business

would be the primary developers and users, and consumers would have no true responsive role.

When technologies such as Radio-Television-Satellite-Film systems and Cable come into being via the communications/entertainment industries in the USA, they are pretty generally seen as properties which have the potential of profit. Our regulatory agencies were set up without an educational mission or responsibility beyond the public interest, convenience or necessity. However, there were far-sighted people who foresaw application of these technologies to education. These farsighted people were not only in education. General Sarnoff, for example, had great aspirations for fledgling television as a means of education for the public good, just as many educators did.

As efforts were made to plan for the educational use of Radio-Television-Satellite-Cable, what happened?

.Because education was identified as something that happened in schools, the technologies were thought of as school aids.

.Because education was something which proceeded according to standard curricula, the technologies were conceived as media for school curricula.

.Because education was something which had approved goals and rewards, the technologies were conceived of as vehicles for conventional school goals and rewards.

Here is an example of what happens when these assumptions prevail: the development of the video disc technology came out of the communications entertainment complex; an extension of systems from which income could be derived from users and consumers. One of the industries developing the technology saw a possible use in education, with the video disc as competitor to the optical film projector in classrooms. Why was the educational use of the video disc limited

to such a narrow concept?

Because education and schooling seemed synonymous. No one thought of asking why we have schools in our society; how they got to be as they are; and whether this concept of the extension of communications technology into the schools was a sound social-cultural decision.

Schools arose originally for a number of reasons:

.there were few teachers of any degree of qualification, and learners had to be gathered where teachers were.

.as many as possible of the available adults and older youths had to be free to carry on the labor-intensive work necessary for survival of the group; they could not be spared for teaching and child watching.

.child watching and the safety of children could be accomplished in schools while teaching was going on.

.there was an acute shortage of books and other resources useful in teaching and learning.

.it was more economical to carry on teaching in groups.

By putting learners together in schools with teachers and resources, the shortages could be minimized, the work force could be deployed as needed, more children would hopefully have the opportunity to learn, costs would be minimized, and children could be kept safe while parents tended to the intensive work of home, farm, shop and community.

Of the five reasons from the social and cultural context of earlier times for the creation of schools, only one has any current validity: the need for child watching and safety. Despite the irrelevancy of most of the early reasons for creating schools to provide education, schools have become a major cultural artifact so pervasive that as new technologies for teaching and learning come along they are primarily categorized as extensions of schooling, rather than vehicles for general, public and adult education.

What this means, of course, is that the strong cultural bias for schooling

determines or dedicates technological media to the support of conventional teaching and learning. Has this approach succeeded? In my opinion it has not. Education as schooling (despite some excellent but exceptional programs) nearly alone of all areas of human endeavor, has remained singularly aloof from the charms, powers and benefits of communications technology. At the same time, in the larger sphere of education that lies outside of schooling, technology has had a greater impact, even though it is far indeed from reaching its potential.

One might be pardoned for observing that, true to its origins, communications technology in the US has served its owners and controllers well -- the communications-entertainment industries -- but has not yet served either schooling or education very well.

The conditions that prevent a greater and more rational use of telecommunications technology in the furtherance of educational goals were admirably analyzed by Oettinger and Zapol (1) three years ago. The analyses of Grayson (2) and Berkman (3) have further diagnosed the malaise that afflicts technology in American education. All of these authors are unquestionably knowledgeable; that they are also advocates of the fuller use of technology in education adds significance to their insights.

What are some of the problems/conditions that seem to impede more effective adoption and use of technologies, such as satellite and cable, in education?

1. Media and technology are largely employed as aids in support of conventionally conceived teaching and learning.

2. There is dependence upon conventional subject-matter-centered sources for software development.

3. There is a continuing perception of education as schooling.

4. There is a continuing emphasis on hardware over software (despite Wilbur Schramm's strong warnings about this years ago) in dollars appropriated, in design, development and evaluation; there is an almost excessive concern with the how rather than the what and why of mediated teaching and learning.

5. No solution has been found to the very real psychological-philosophical problem of educators in the system who feel that they face a devastating loss of self-concept if they embrace technology.

6. It is difficult if not impossible to develop a consistent, long range national policy for technology in education because communications technology is largely owned-controlled by communications-entertainment interests which have no interest in education or responsibility for it. Government regulatory agencies--which also unfortunately lack an education mission--tend to follow a policy of virtual non-interference with private enterprise.

7. Educational interests have not been able to develop effective political strategies to equal and counterbalance the powerful communications/entertainment lobbies in the Congress, Executive and regulatory agencies.

8. The political climate makes federal support for long range development uncertain, a prime reason for--

9. The prevalence of short term research and experimental projects (the "think small and do it quickly" syndrome) which produce little of lasting impact.

10. The difficulty of "putting it all together" as long as responsibility for education in government is separated from authority elsewhere for communications policy, marketing control, copyright, distribution of materials--none of which has an education mission.

11. The tradition in government, public service, schools and service industries of doing things <u>for</u> people, making them <u>dependent</u> instead of helping people to do things for themselves with increased independence, self reliance and responsibility. The dependency-reinforcing concept always strengthens the established way of doing things, the status quo, and hence most likely, the conventional.

12. Software developers have been fearful of the distance that the use of media places between teacher and learner, and have failed to perceive the utility and advantages of <u>exploiting</u> distance in such things as learner motivation, adaptation to individual differences, learner autonomy, the integration of learning and living in the real community, exploring and discovering according to roles of learners rather than institutional roles. Distance implies freedom, independence, responsibility and choice-making. Agencies accustomed to doing things <u>for</u> people sometimes see these concepts as undermining conventional institutional roles.

While any technology emerges within the contexts of the culture of origin -- an extension of what has been and is -- it also has a dynamic of its own. Henry Ford did not anticipate the far reaching cultural changes that would result from mass producing autos. Today, anyone with even the slightest acquaintance with organization and systems theory knows that whatever technology is developed as a sub system of the larger system, the new sub system affects every part of the total system, weakening here, strengthening there, modifying traditional input, output, monitoring and control processes. The failure on the part of government policy making and regulatory agencies to understand communications and entertainment systems as social/cultural sub systems is bad enough if it is sheer ignorance; and some would say it borders on social negligence. The public interest, convenience and necessity should not be empty words." What is at stake is more than property or profit, but the culture of our people--a living heritage possessed by each of us, so fragile that once eroded or distorted it cannot be readily replicated, yet without which, as a people, we are peculiarly vulnerable.

Education has historically had a major role in culture diffusion. Perhaps if education were not so strongly identified with schooling, this simple truth would be more easily perceived.

Most learning occurs outside of schools. Children and youth now apparently spend more time linked, as McLuhan would put it, with electronic, mediated experiences than in school. The larger sphere of learning is therefore outside of the schools themselves. A society that fails to understand and exploit the intrinsic joys of learning, perceiving, understanding, accomplishing, coping, runs instead after pleasure, turns decadent, and risks losing its social values--the cultural cement that binds us together, and gives us survival power.

It is interesting to note that educational television's greatest smash hit, Sesame Street, exists in a non-schooling format. Similarly, the recent Peabody

and other "educational" awards won by NBC-RCA are also in a non-schooling format, as are BBC's great public education series, such as Masterpiece Theatre. I think this tells us something.

The non-schooling format offers educational media the opportunity and the advantage of doing whatever is needed with respect to education and learning, and not merely extending and replicating conventional schooling. The intended pre-school audience of Sesame Street, and the adult viewers of the other prize programs mentioned, are outside the prescriptive boundaries of schooling. Programming for these consumer populations does not have to conform to conventional concepts of subject matter, teaching and learning.

I am not suggesting that there is no place for satellite/cable technology in the regular schools. There is, and an important place. However, I think that the conservation of resources and energy at this point in media development, indicates that more progress will be made in non-school contexts than in schools. I am not denigrating or discouraging the work being done by dedicated people in school media programs. I just think that before we can do a really good job in schools, schooling must undergo a clarification of what teaching and learning as separate activities are; relate learning more directly to life realities; diminish learner dependence on schools and teachers; encourage learner responsibility, self reliance and independence; and evolve teacher roles that are satisfying, rewarding and compatible with a focus on learners and learning as well as subject matter. Until these things happen I think our relatively scanty resources will be used with greater effect for society if we concentrate our shots in the non-schooling context. By "non schooling" I mean the employment of satellite/cable in the general education sphere rather than in specific support of conventionally conceived schooling. School uses of satellite/cable in the general education sphere would have utility for the general population

as well. Schools of the open and distance types, where employment of media is essential and natural, are ready for satellite/cable use.

But there are other reasons: the greatest need, I think, is for strong education programs via the media, outside the schooling context. Our whole society hungers for values, for commonly shared beliefs, for the quietly savored pride and joy of being human, being American. The high value we place on rooting out evil through a determined exercise of freedom of speech to attack, expose, and bring down, is not, ultimately, enough. While as a people we have seemed inclined to turn our back on our Puritan heritage, nothing has been more Puritanical than the commitment of writers, producers, dramatists, comedians, educators, politicians -- practically all of us -- to concentrate on exposing evils, great and small. This should unquestionably continue. But what about our other great legacies from the cultures that have shaped the American people? Compassion, trust, neighborliness, unselfish love, personal commitment? The upsurge of interest in the past, the nostalgia for a non-violent, non-material way of life, for enduring and ennobling values, are evident at all age levels. These are learned behaviors and attitudes.

It is well known that the behavior of a person is largely dependent upon the opportunities that are made available or denied to him. "Behavior is readily modified by supplying or withholding maps or models of how other individuals behave." (4)

What is or is not on the tube (now our most important source of popular culture and education) makes a profound difference to the culture and health of a society.

Many social commentators have expressed concern and alarm over the lack of balance in television programming. Is there an implication here for satellite and cable in the sphere of public education? If there is a lack of a balanced

range of models for behaviors and attitudes, is it any wonder that growing numbers of people fear personal relationships, become lonely, introverted, warped, selfish and unrequiting?

A strong satellite/cable program of public education (not schooling) could play an important part in restoring our popular culture. This is in many ways more important for our growth as a people than the indifferent use of media in conventional schooling. And it is infinitely more important than selling another brand of deodorant.

Allied to this is the fact that we have generally failed to perceive the importance of adult and continuing education. In the past, when generations lived together throughout their lives, the formal education that was provided to youth in schools was augmented throughout life by the elders of the society. One of the serious signs of cultural breakdown in our society is the separation of youth and age; each group deprived of the cultural feeding roots it needs with the other to be, grow, know joy and reality, accept change, adapt, trust, care, love and take unselfish responsibility. Public, popular education via technology could fill the yearnings of people for such experiences.

The agencies which regulate communications and entertainment have a responsibility to set policies and regulate so that concern for the cultural development of a society has at least as much priority as property and profit. The violence, brutality, bad taste and inverted morality of the commerical media may through sheer shock effect push ratings up, but this is hardly what an intelligent, compassionate and caring people would regard as the public interest, convenience and necessity. Satellite/cable systems have a significant role, particularly in the public education area, to restore the cultural balance.

I suggest that adult education is the area of greatest need and potential for educational technology. It reaches adults in the natural environment for

learning--the home and community, where life problems must be faced. Adults are part-time learners, tuning in and tuning out as needs and self motivation determine. They are not so much interested in subject matter per se, but in problem solving, applications. They tend to be interdisciplinary in learning. They are more mature, have better perception of needs, make decisions and discipline themselves independently. Hence in programs intended for adults there is greater freedom to innovate, and less need for academic or subject matter control. Adults will even spend money on learning opportunities. (I once told a manufacturer that the greatest market for his video disc was in the exploding adult education movement throughout the world. His response was, "Where can I find the schools that will require my discs?" He could not think of education except as schooling.)

Jacob Bronowski in the last chapter of the Ascent of Man remarked that the long childhood of man will end only as we begin to understand the importance of man as a learner, and free ourselves from older, prescribed notions of what knowledge is and how it may be used to create a better society.

Quite evidently, inadequate concepts of learners, learning, the learning environment and the education process have frequently blunted the most sincere efforts in the use of telecommunications media. Media that reach across our society, into communities and homes, that attract millions of self-actuated individuals in non-school, non-group settings, have nevertheless been focused primarily on in-school use. That there is a place for school use is unquestionable; but even school use does not have to be in the school. In fact, non-school use might begin to take education back into the home and community, as it does now in programs of open and distance learning.

Furthermore, the potential of the satellite and cable is different from that of broadcast or closed circuit TV. What is different is the scale and scope of area over which signals can be received and transmitted. This is

significant. The satellite is a means of seeing the earth, society, man, his struggles, needs, joys, frustrations, rages, achievements and failures from a larger perspective. Throughout history literature has recorded stories of leaders and prophets who--better to understand what was happening around them--went up into the hills to see the larger picture. Because the satellite is our eye in the sky, its receiving and diffusing beams spread beyond our immediate confines. It is one medium that need not be parochial; it sees the whole community, not only the school; it sees the state, not only the community; it sees the region, not only the state. Hence it is a tool for inter- as well as intra-cultural learnings. We are not any longer constrained to diffuse only that which we already see and know. We can now engage man as a learner with what individually in our small surrounds we cannot see or know by ourselves. Think of what this means for "discovery" learning about ourselves, our knowledge, our beliefs, our culture and about others. We can now have perspectives that have never before been available. With such a tool, why would anyone want to do the conventional things with it?

The satellite and cable are important technologies for enlarging man's view of man and therefore of his learning and understanding. All men, as McLuhan observed, now live in the same global village; this certainly has implications for the diffusion of education via satellite and cable.

John Schafer, an English teacher in Massachusetts, spent two years in the Peace Corps in Ethiopia. Before a second tour of teaching English in Vietnam, he "thought of putting together a unit called 'A Journey Behind the Cultural Curtain.'" Schafer says, "The more I read about our two great crises, the Vietnam War and Negro unrest, the more they seemed to me to be problems in cross-cultural communication... it has been my experience that knowledge of other people and their values is a necessary prelude to mutual respect and affection." (5)

Some years ago in a volume on Third World Education, I proposed that the communications satellite become the vehicle for a new kind of reciprocal interdependence in adult education (6).

The most difficult and elusive question with respect to the use of the satellite (or any other medium) for education is: what should it be used to accomplish? Is it not time to suggest that, since the purposes of intercultural education via satellite have not yet been worked out, we should use the satellite as a tool in developing these purposes? An interactive, reciprocal, and interdependent teaching and learning experience for an international category of adults should be developed. Dr. Milton Miller, a psychiatrist at the University of Wisconsin, reacted to the question of participation in this way:

> "A new and major technical advance, Satellite Communication, provides the opportunity to work toward and conduct experiments with the following goals in mind: (a) Increase the ability of people separated from each other by continents and oceans, language differences, ideological disparities and cultural discrepancies, 1. to speak to each other, 2. to hear each other, particularly about the interests and needs of each, 3. to communicate as equals. (b) In a certain sense, the coming of educational satellites offers an excuse, an opportunity, a rationale for one or a dozen institutions or nations to become full partners in the task of learning to talk to each other and listen. Only a full partnership offers any possibility of working. At the moment, the signal that we contemplate is an opportunity. I believe the educational satellite offers an opportunity to explore whether a group of separated people can work cooperatively.... Can a new technological tool provide impetus for widely scattered partners to learn to speak to each other and hear each other?"

We could start by using the communications satellite as a vehicle for a series of international, intercultural teleconferences, sponsored by universities in different countries. The subject of the teleconferences would be the purposes to be served by satellite and cable transmitted adult education, and the reasons that such purposes are important to countries of different cultures. Each country would search for and communicate its own needs and priorities in the exchange--a true quid pro quo.

If we can speak to and hear each other, then there is hope that we can go from there to developing, difficult as it may be, the purposes and the processes of a reciprocal interdependence in the international, intercultural education of adults via satellite.

Teaching, learning, communications, entertainment, and education are overlapping spheres all within the larger sphere of our culture. The health of a society is partly the health of its culture.

In a society obsessed with fear of disease, who knows what health is? Along this line, 14 senior clinicians at the Meninger clinic, uncertain of what health is because of long concentration on the problems of unhealthy people, decided to study 80 of the healthiest people who could be found. The researchers came up with five common characteristics of these healthy people:

1. all had a variety of sources of satisfaction or gratification.
2. all were able to treat other people as unique individuals.
3. all were flexible under stress (they had more than one way of seeing and reacting to people and problems).
4. all were able to recognize and accept their own assets and limitations.
5. all were active and productive. (7)

Note that each of these characteristics is capable of being learned. None is innate, special, given only to supermen. Most people fervently and sincerely want to be healthy in these ways. Adult education, public education via the media could provide the opportunity for models and learning that would meet needs of this kind.

But this means no highway in the sky for the conventional teaching and learning that is implied in schooling. It means seeing the learner as a person wherever he is; it means seeing the environment for learning as the learner and

his surround wherever he is (not just the school); it means respecting the learner and letting him take responsibility, experience failures and successes so he learns and accepts his own strengths and weaknesses, and doesn't blame others for failure, or envy them for their success, or assumes success is solely the result of crooked machination; it means options of short and long duration in learning, selected by self determination; it means having more than one way of seeing and reacting to problems; it means satisfactions derived from an honest view of self and others; and it means the recognition of elements of trust and worthiness in self and others that bring people together in mutual caring and coping. It means reciprocal interdependence, long a part of our cultural heritage for survival, not lost, just overlooked in our society's frenzy to sell, make profits, and communicate materialism.

The public interest, convenience and necessity have given us access to media of extraordinary power. The satellite and cable systems that are yet to be created and used to diffuse "education", domestic and intercultural, could be the media for bringing to Americans and others the learnings and understandings that will help us live together on this small planet in healthier, more active and productive ways than is now the case. But this, I suggest, will not be the conventional education of schooling; it will find its best acceptance in the adult field; and will engage universities as unique resources for program development that among other things would help maintain the health of our popular culture. With respect to the recognition of the true place of continuing learning in society, this would be the greatest assistance that could be provided to schools and schooling.

Ladies and Gentlemen,

A keynote speech is intended to spark controversy, suggest some targets, and energize conferees to "have at it". Well, now it's your turn. We are privileged

to have you here. Your experience, insight and expertise may help all of us to participate in a healthy, active and productive conference. Good luck and best wishes.

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